

## Claims

- [c1] An isolated nucleic acid encoding a mammalian Bok protein.
- [c2] The isolated nucleic acid according to Claim 1, wherein said Bok protein comprises the amino acid sequence as set forth in SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6 or SEQ ID NO:8.
- [c3] The isolated nucleic acid according to Claim 1, wherein said Bok protein is a BH3<sup>i</sup> variant protein.
- [c4] An isolated nucleic acid comprising at least 18 contiguous nucleotides of the sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5 or SEQ ID NO:7.
- [c5] An isolated nucleic acid that hybridizes under stringent conditions to the nucleic acid sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5 or SEQ ID NO:7.
- [c6] An isolated nucleic acid encoding a BH3i variant of a pro-apoptotic Bok related protein.
- [c7] The isolated nucleic acid of Claim 6, wherein said pro-apoptotic Bok related protein is Bak or Bax.
- [c8] An expression cassette comprising a transcriptional initiation region functional in an expression host and operably linked to a nucleic acid having a sequence of the isolated nucleic acid according to Claim 1.
- [c9] A cell comprising an expression cassette according to Claim 8 as part of an extrachromosomal element or integrated into the genome of a host cell as a result of introduction of said expression cassette into said host cell, and the cellular progeny of said host cell.
- [c10] A method for producing pro-apoptotic protein, said method comprising: growing a cell according to Claim 9, whereby said protein is expressed; and isolating said protein free of other proteins.
- [c11] A purified polypeptide composition comprising at least 50% of the protein

present as a Bok protein or a fragment thereof.

- [c12] A purified polypeptide composition comprising at least 50% of the protein present as a BH3<sup>i</sup> variant of a pro-apoptotic Bok related protein.
- [c13] A monoclonal antibody binding specifically to a Bok protein.
- [c14] A non-human transgenic animal model for Bok gene function wherein said transgenic animal comprises an introduced alteration in a Bok gene.
- [c15] A method of inducing apoptosis in a susceptible cell population, the method comprising:  
upregulating expression of Bok or a BH3<sup>i</sup> variant of a pro-apoptotic Bok related protein in said cell population; wherein apoptosis is induced.
- [c16] The method of Claim 15, wherein said susceptible cell population comprises reproductive tissue.
- [c17] The method of Claim 15, wherein said upregulating step comprises induction of expression of an endogenous Bok gene.
- [c18] The method of Claim 15, wherein said upregulating step comprises introduction and expression of an exogenous Bok coding sequence.
- [c19] The method of Claim 15, wherein said upregulating step comprises introduction and expression of an exogenous coding sequence for a BH3<sup>i</sup> variant of a pro-apoptotic Bok related protein.